

Remarks/Arguments:

In an Office Action dated June 28, 2006, the Examiner has made the following rejections:

claims 1-12, 16-17, 21, 23-29, 33-39, 41-46, and 48-50 as anticipated by Chun (US 2004/0229611);

claims 13-15, 22, 30-32, 40 and 47 as obvious over Chun in view of Wang (US 6,990,453);

claims 18-20 and 35 as obvious over Chun, Wang and Ravago (US 6,529,584).

The Examiner has further objected to claims 10 and 27 as unclear, but this objection was not a rejection under 35 USC 112 (second paragraph). Claim 10 is canceled, but the Examiner's assumption respecting claim 27 is incorrect. When executed, the program of parent claim 23 results in a first set of features sent in response to a user input, and a second set of features sent in response to a received response message. Claim 27 recites that the first set of features is from a first (time-bounded) segment of the media sample, and is sent along with a different segment of that media sample. In an example, a recognition service may then conduct its own feature extraction from the different segment that it receives, resulting in a two sets of features (the first received set, and a set extracted itself from the received different segment). Should this be insufficient for a unique identification, the recognition service sends the request message that requests additional features. Parent claim 23 recites that this second set of features (extracted by the mobile station) is sent in response to the request message.

This Amendment cancels claims 10-11, 21, 28-29, 31-34, 36, 39, and 41-46, leaving pending claims 1-9, 12-20, 22-27, 30, 35, 37-38, 40, and 47-50. The claim amendments made herein draw support from the written description as follows: claims 1, 22, 23, 37, 48 and 50 from paragraph [0053]; and claim 12 from paragraph [0032]. Other claims are amended for proper dependency, clarified antecedent basis from the amended independent claims, and to more clearly recite the particular subject matter. No new matter is added.

The 102 rejections appear not to be supported by Chun in that each and every embodiment of Chun is seen to transmit from a mobile terminal the entire image data (or other data file) to an information database 320 where pattern matching occurs. Specifically, while Chun may also transmit classification/keyword information about the image data to enable an easier search by a search system (para 0042-0043), the classification/keywords are not seen to be *features*

that are extracted from the image file as in the pending claims. The application specifies the term *feature* at para 0019; in no instance is Chun seen to disclose that the classification/keyword data is a digital marker, descriptor, or other identifier of the content of the image data that is gleaned or extracted by a *digital analysis* of that image data. Chun states only that the data 164 of the storing section 160 should include classification and/or keyword information (0042) but does not further detail that information or how it is determined. One of ordinary skill in the art would read this disclosure as implying manually entered classification or keyword data, consistent with the use of those terms in the art.

Additionally, it is the image data itself that is transmitted by Chun's mobile terminal (para 0058-0060). The search system compares the image data received from the mobile terminal to an information database 320 using a pattern matching section 340. Chun's Fig. 3 clearly discloses that the information database 320 and pattern matching section 340 are components of the search system 300, and distinct from the mobile terminal 100. At para 0067, Chun discloses that the search system 300 can be a base station. See also steps S180 of Fig. 4 and S350 of Fig. 5.

Chun discloses at para 0078 that it is possible to extract an image, text or sound stored in the storing section 160 (of the mobile terminal) and send a signal requesting detailed information about the extracted image, text or sound to the search system 300. In the context of the previous two sentences, this is seen to describe retrieving a *stored* image data, text or sound as opposed to an image or text photographed or a sound recorded live at the mobile terminal 100. In the embodiments of this paragraph, Chun consistently transmits the image, text or sound for pattern matching at the separate search system 300. This is because the "detailed information" returned after Chun's pattern matching is described by example (para 0043) as the name of a photographed flower, for which the searching system 300 may need to access servers 420, 440, 460 on the Internet 60 (Fig. 3).

Claim 1 is amended to recite that the processor is automatically responsive to a request message, received at a receiver, to extract a second set of features from the media sample, and that the transmitter sends the second set. Claims 23, 48 and 50 recite similarly. This concept of adaptively sending additional features of the media sample upon request (e.g., when a song recognition service is unable to uniquely match a song from the database to the

first set of features) is seen as both novel and inventive over Chun, Wang and Ravago, alone or in any combination. Claims 1, 23, 48 and 50 describe a cooperative extraction (e.g., the first set of features may be insufficient alone to identify a unique media file from the database). None of the cited references, alone or in combination, is seen to use a cooperative approach between the remote extraction device and the central database site.

Claim 37 is directed to a computer program that may be used to search the database. For the reasons discussed above, this is seen as both novel and inventive over the cited references.

Claim 13 is re-written as an independent claim, and recites sending messages each having a timepoint, a spectral slice, and an identifier relating the spectral slice to the timepoint. Given the changes to claim 1, the elements of claim 13 recite a specific approach to providing information to search the database, wherein each of a plurality of messages include a spectral slice and a timepoint linked to it.

In Wang, landmarks and fingerprints are used to build a database, and a user sends an exogenous media sample to the database. Landmarks and fingerprints from the exogenous media sample are matched, and the media file from which the exogenous media sample was taken is identified. As defined in Wang, “an exogenous media sample is a segment of media data”, which “can be thought of as ... a distorted and/or an abridged version or rendition of the original recording.” A ten second segment of a five minute song is given as a specific example of an exogenous media sample. (col. 5 lines 60 to col. 6 line 3) Regardless of any other distinction, in no instance is Wang seen to use a plurality of messages, each with a timepoint and a linked spectral slice extracted from a digital version of the same media sample as in claim 13.

Ravago is not seen as particularly relevant, and is cited only for its teachings as to MPEG-7. Combining Chun with Ravago as asserted is still seen to result in the Chun mobile terminal transmitting the image data to a search system 300, regardless of how that search system 300 executes its pattern matching on the received image data 300. Extracting features at a mobile station and transmitting those extracted features is clearly patentably distinct over that combination.

Respecting the dependent claims, claim 12 recites that the processor extracts at least some of the first set of features prior to actuation of a user input. Such pre-processing is detailed at paragraph [0032] of the written description, and is not seen as disclosed in any cited reference or obvious from their combination. Claim 22 recites that the request message identifies additional features of that request message by type, which the mobile station satisfies in the second set of features. This is particularly valuable when, for example, a central site finds several matches to the first set of features and identifies exactly what feature type might distinguish among only those several matched files. Because no reference contemplates a cooperative identification effort, they neither disclose this aspect nor make it obvious. Claims 26 and 47 recite similarly. Claim 25 recites that a number of additional features is specified, offering similar advantage and not seen as obvious over the art.

In view of the above claim amendments and remarks, the pending claims are seen to distinguish over Chun, Wang and Ravago, either alone or in combination. The Applicants respectfully request the Examiner to pass all pending claim to issue in view of the amendments and remarks.

Respectfully submitted:


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